Self Diagnosis Supported model

SERVICE MANUAL

AE-6BA CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
KV-32XL90B	RM-942	FR	SCC-Q83S-A	KV-32XL90E	RM-942	ESP	SCC-Q81V-A

FD Trinitron

KV-32XL90

RM-942

TRINITRON ® COLOR TV

SONY ®

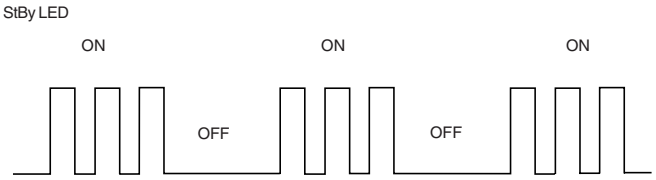
AE-6BA SELF DIAGNOSTIC SOFTWARE

The identification of errors within the AE-6BA chassis is triggered in one of two ways :- 1: Busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED (Series of flashes which must be counted) See table 1, non fatal errors are reported using this method. Each time the software detects an error it is stored within the NVM. See Table 2.

Table 1

Error Message	LED Code
No error	00
Reserved	01
OCP (Over Current Protection)	02
Over Voltage Protection	03
No Vertical Sync	04
IKR Error at power on	05
IIC bus clock and/or data lines low at power on	06
NVM no IIC bus acknowledge at power on	07
Horizontal Protection	08
Tuner no acknowledge at power on	09
Sound Processor Error	10
Reserved	11
Scanrate Error	12
DAC Error	13
Backend Error	14
Dynamic Convergence Error	15
PIP Error	16

Flash Timing Example : e.g. error number 3



How to enter into Table 2

1. Turn on the main power switch of the TV set.
2. Program Remote Commander for Operation in Service Mode. [See Page 21].
3. Press 'AUX/VIDEO' 'AUX/VIDEO' > 'MENU' on the Remote Commander.
4. Using the Remote Commander, Scroll to the 'Error' item using the down arrow key, then press the right arrow key.
5. The following table will be displayed indicating the error count.

Table 2

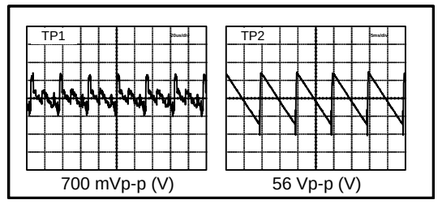
Error monitor		
WORKING TIME:	**(Hours:Minutes)**	82:33
Error counters:		
E02: OCP		0
E03: OVP		0
E04: NO V SYNC		0
E05: IKR		0
E06: IIC		0
E07: NVM		0
E08: H PROT		0
E09: TUNER		0
E10: SOUND		0
E11: 9 VOLTS		0
E12: SCANRATE		0
E13: 3DCOMB		0
E14: BACKEND		0
E15: DYNCON		0
E16: HIGH VOLTAGE		0
E17: AVSWITCH		0
E18: CHROMA DEC		0
E19: FRCA		0
E20: PJ ENG		0
E21: DAC		0
E24: SPEAKER PROT		0
E25: MEMORY STICK		0
Select: ▲ ▼	Previous Menu: ◀	

Note: To clear the error count data press '80' on the Remote commander.

~ A Board Semiconductor Voltage Table ~

Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)
Q1100	0	0	4.5	Q2202	0	0.4	0	Q2500	0.1	0.1	0.6	Q5101	0.8	1.4	6.8	Q5208	0	0	1.5	Q6202	3.4	3.4	0
Q1300	2.7	2.1	8.4	Q2300	0	0	0.7	Q2501	0	0.6	0	Q5200	6.8	6.3	3.0	Q5209	0	0	1.5	Q6203	0	0	3.4
Q1301	2.1	2.1	0	Q2301	0	0.4	0	Q2502	0	0	5.0	Q5201	0	0.4	3.0	Q5210	0	0	1.5	Q6204	3.4	3.4	0
Q2000	0	0	4.7	Q2302	0	0.4	0	Q2503	0	0	5.0	Q5203	0	0.4	3.0	Q5211	0	0	1.5	Q6205	3.5	2.7	3.4
Q2200	0	0	-1.6	Q2400	3.9	3.4	0	Q2504	5.0	5.0	0	Q5205	0	0.4	1.5	Q5404	0	12.1	0	Q6206	1.5	2.0	2.7
Q2201	0	0.4	0	Q2401	0	0	4.7	Q5100	2.4	1.8	0	Q5207	0	0.4	3.0	Q6201	1.5	0.6	3.4	Q6207	0	0	3.4

~ A Board Waveforms ~



~ A Board IC Voltage Table ~

IC Voltage Table			IC Voltage Table			IC Voltage Table			IC Voltage Table			IC Voltage Table		
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC2200	1	4.5	IC2300	6	0	IC2400	12	-4.0	IC5102	2	0	IC5400	7	0.4
	2	4.5		7	0	IC2500	2	0		5	2.5	IC6202	4	1.3
	3	4.5		8	0.5		5	0.9		6	2.5		5	6.7
	5	4.5	IC2400	1	0		7	0		8	2.2	IC6207	4	1.3
	6	4.5		2	-4.0		8	0	IC5104	1	14.6		5	6.7
	7	4.5		3	10.0		9	0	IC5400	1	0.4	IC6209	4	1.3
IC2300	1	4.0		5	0		10	0		3	-12.3		5	6.7
	3	4.0		6	-13.2		11	0		5	0	IC6212	4	5.1
	5	0.5		10	3.9	IC5102	1	17.1		6	15.7		5	0

~ A Board Location Table (A Side) ~

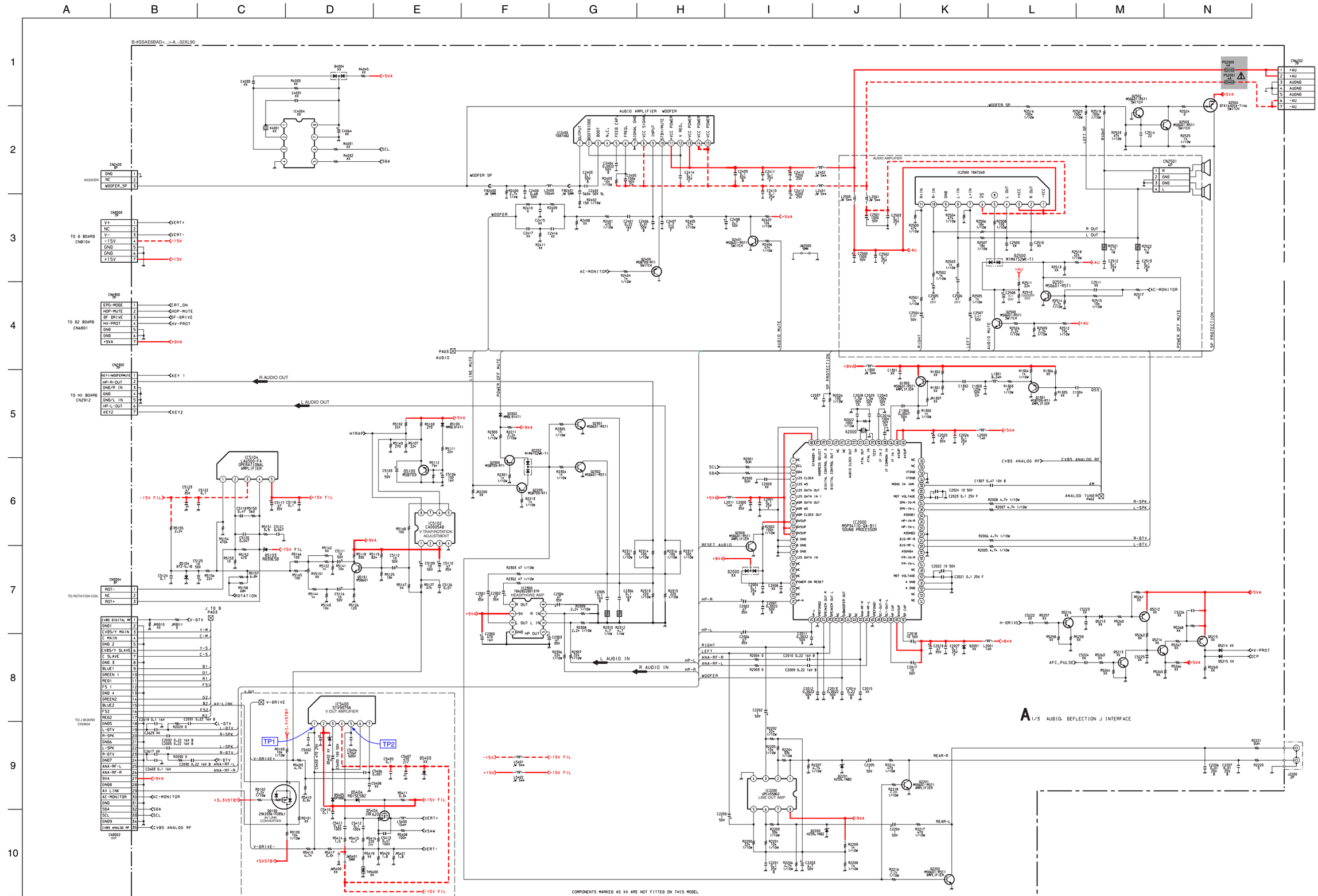
DIODE						IC					
D2200	D - 3	D5405	D - 10	D6211	K - 4	IC2500	H - 3	IC6204	M - 4	IC2400	J - 4
D2201	E - 3	D6201	J - 9	D6212	J - 9	IC5102	I - 10	IC6207	J - 10	IC5400	E - 10
D5103	H - 10	D6203	L - 5	D6213	L - 8	IC5104	H - 10	IC6209	J - 8	IC6202	L - 8
D5404	E - 11	D6204	K - 2			IC5400	E - 10	IC6210	K - 4	IC6212	L - 3
		D6210	L - 4			IC6202	L - 8	IC6212	L - 3		

~ A Board Difference Table ~

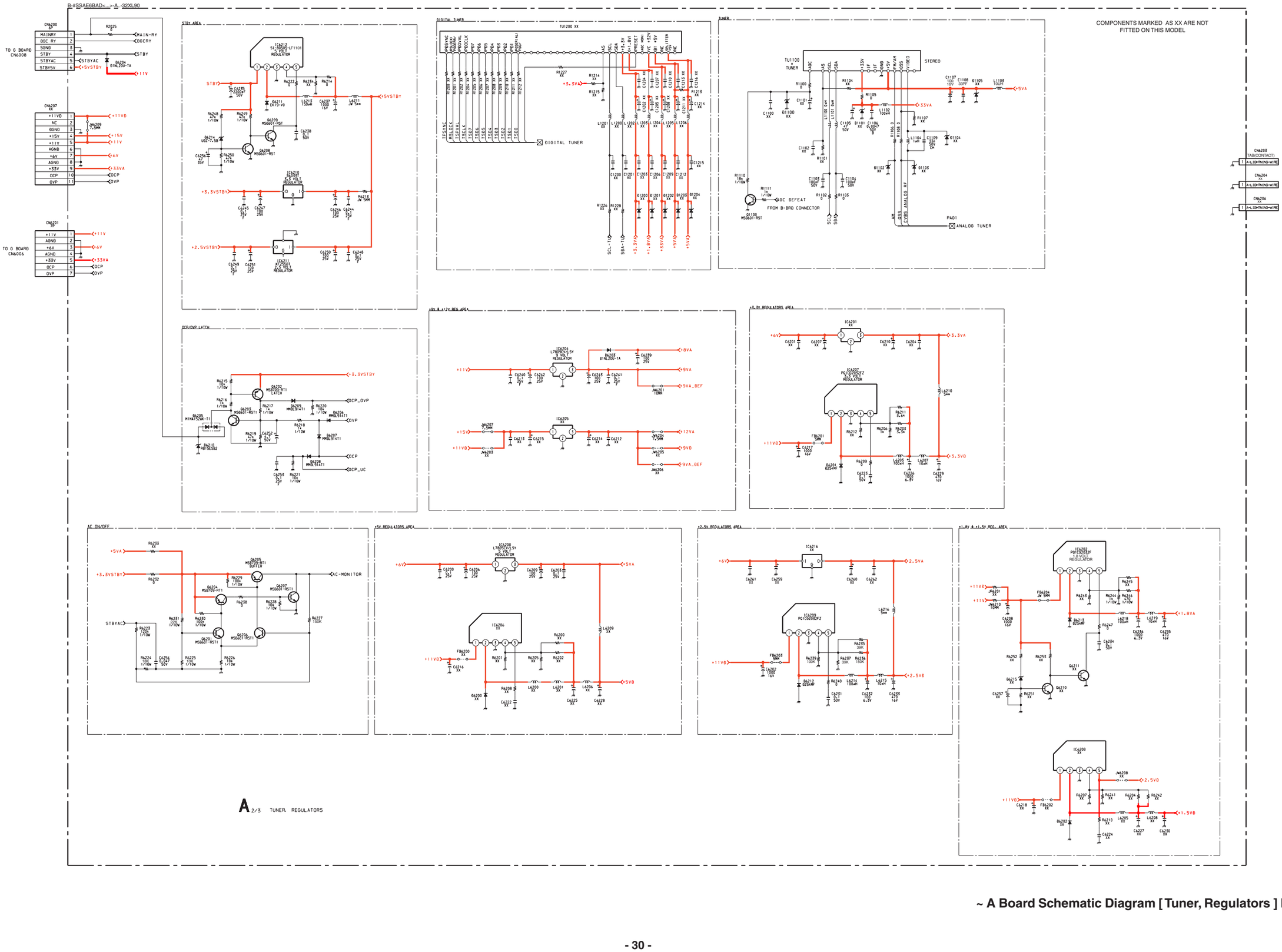
Ref	KV-32XL90B	KV-32XL90E
TU1100	BTF-EF411	BTF-EC411

~ A Board Location Table (B Side) ~

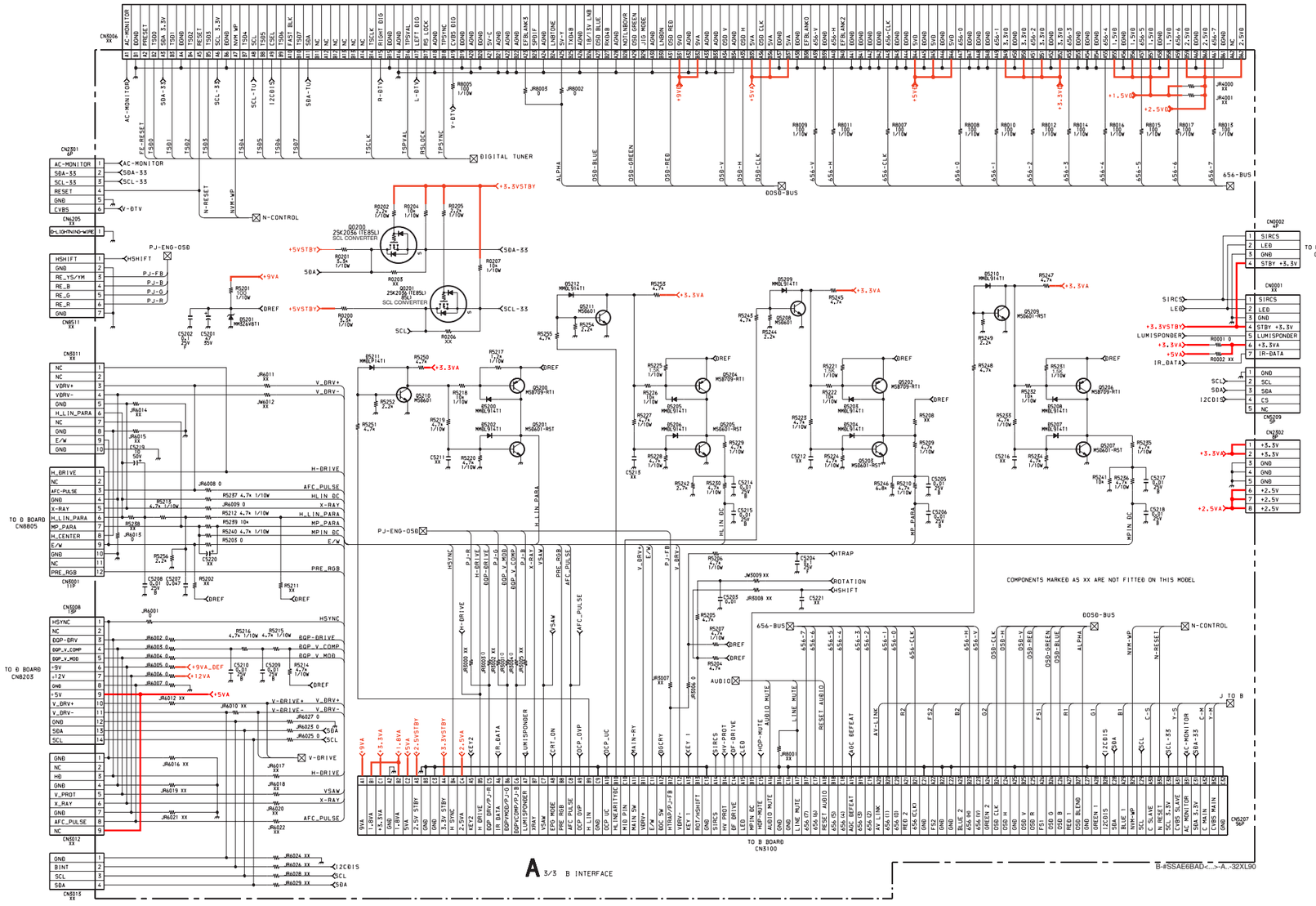
DIODE																					
D2200	L - 3	D5206	G - 7	D6204	E - 2	IC2200	L - 4	IC6207	F - 9	Q1300	L - 2	Q2401	F - 4	Q5202	H - 4	Q5404	K - 10				
D2201	J - 4	D5207	G - 6	D6205	E - 3	IC2300	J - 3	IC6209	F - 9	Q1301	K - 2	Q2500	H - 3	Q5203	H - 4	Q6201	E - 2				
D2202	J - 4	D5208	H - 6	D6206	D - 3	IC2400	G - 4	IC6210	F - 4	Q2000	J - 3	Q2501	H - 3	Q5204	G - 7	Q6202	E - 3				
D2500	H - 3	D5209	G - 7	D6207	D - 3	IC2500	H - 3	IC6211	E - 5	Q2200	I - 4	Q2502	H - 4	Q5205	F - 6	Q6203	E - 3				
D5100	G - 10	D5210	G - 6	D6208	D - 3	IC5102	G - 10	IC6212	E - 4	Q2201	L - 3	Q2503	H - 4	Q5206	H - 7	Q6204	E - 3				
D5104	H - 9	D5211	G - 6	D6210	D - 3	IC5104	H - 10	TRANSISTOR		Q2202	L - 3	Q2504	H - 4	Q5207	H - 6	Q6205	E - 2				
D5200	F - 7	D5404	K - 10	D6213	D - 8	IC5400	K - 10	Q0100	K - 6	Q2300	I - 4	Q5100	G - 10	Q5208	G - 7	Q6206	E - 2				
D5202	F - 6	D5405	L - 10	D6214	E - 4	IC6200	E - 5	Q0200	K - 7	Q2301	I - 4	Q5101	F - 10	Q5209	H - 6	Q6207	E - 2				
D5205	G - 7	D6201	F - 9	IC		IC6202	D - 8	Q0201	K - 7	Q2302	J - 4	Q5200	F - 6	Q5210	G - 6	Q6208	E - 3				
		D6203	D - 5	IC2000	K - 4	IC6204	E - 4	Q1100	M - 2	Q2400	F - 4	Q5201	F - 6	Q5211	G - 6	Q6209	E - 4				



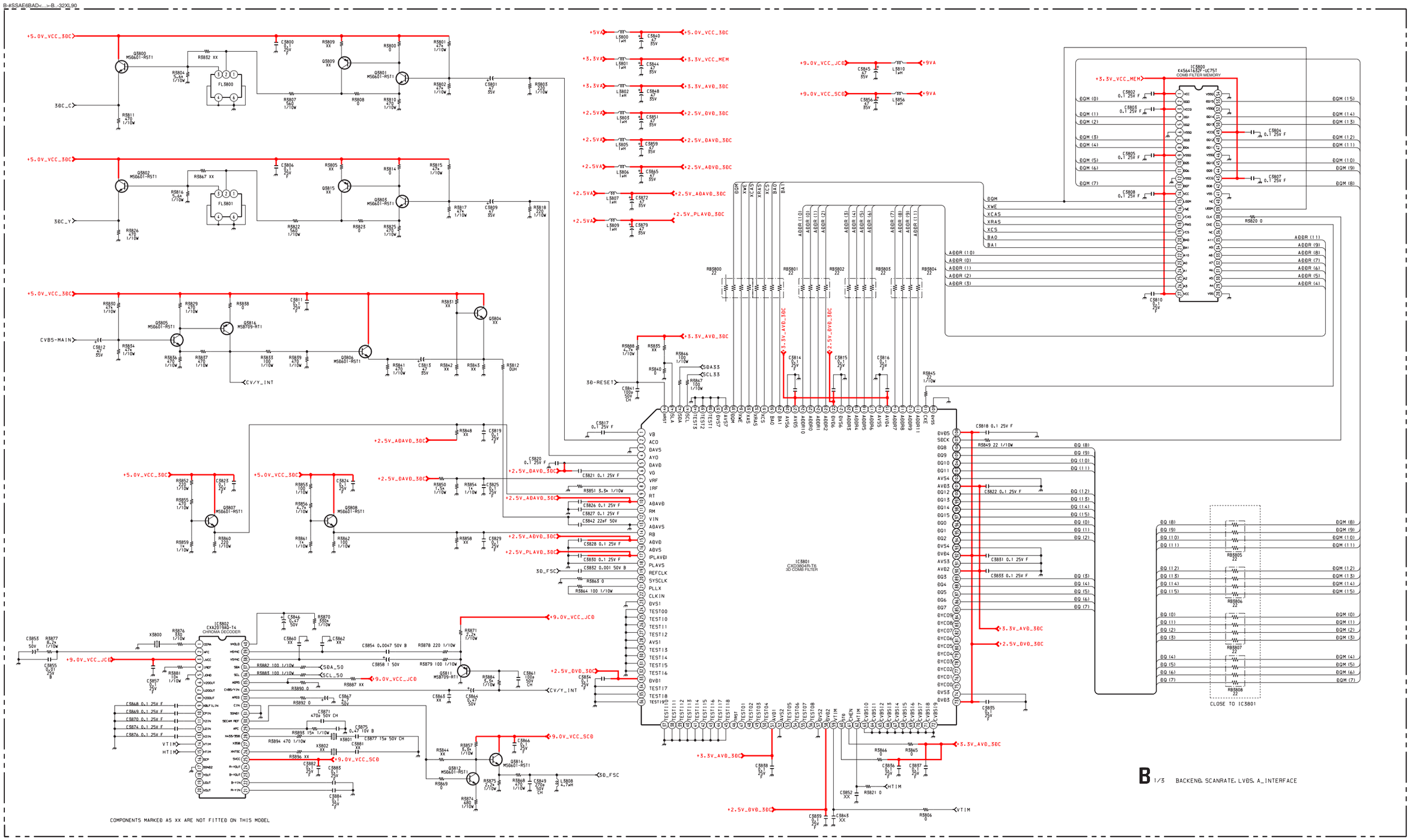
~ A Board Schematic Diagram [Audio, Deflection J Interface] Page 1/3 ~



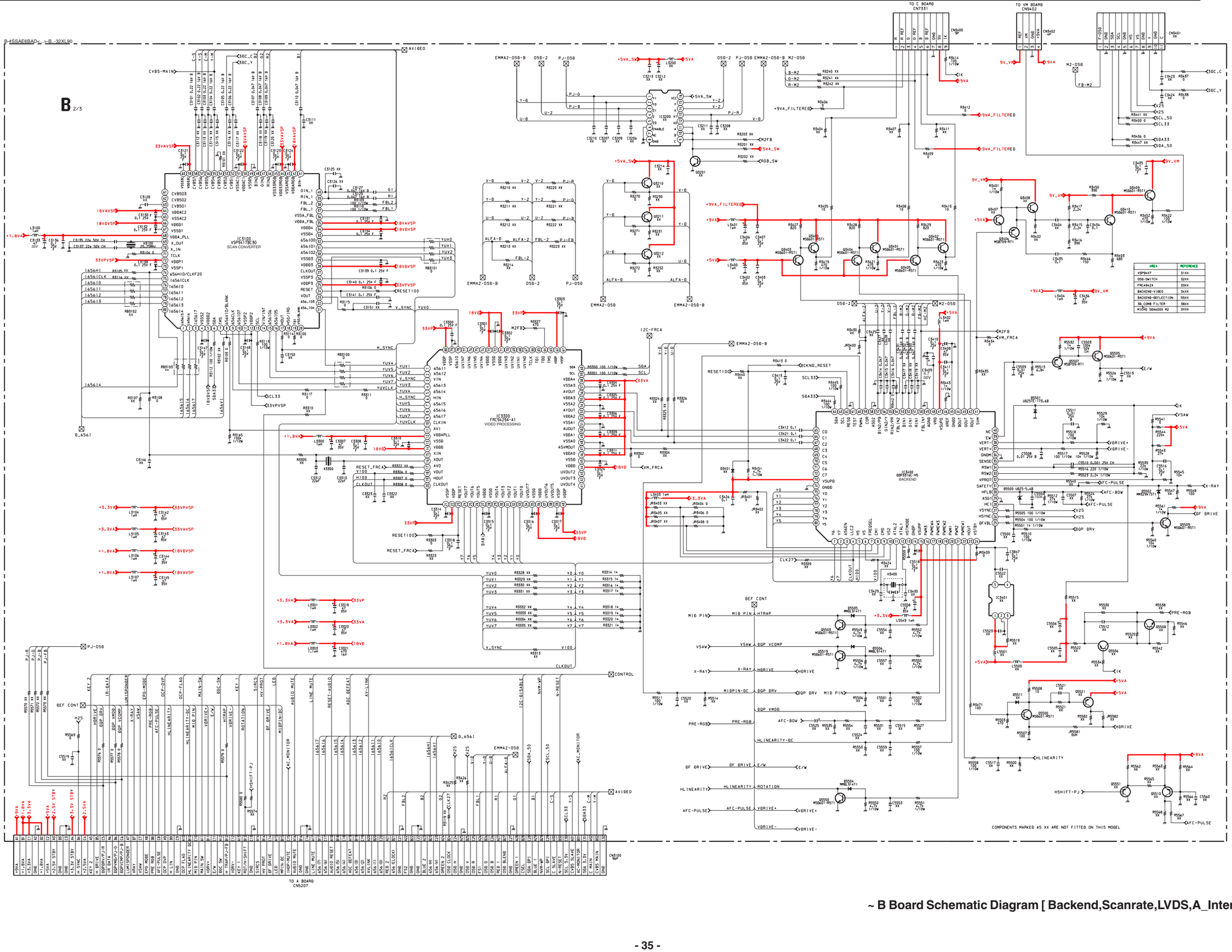
A 2/3 TUNER, REGULATORS



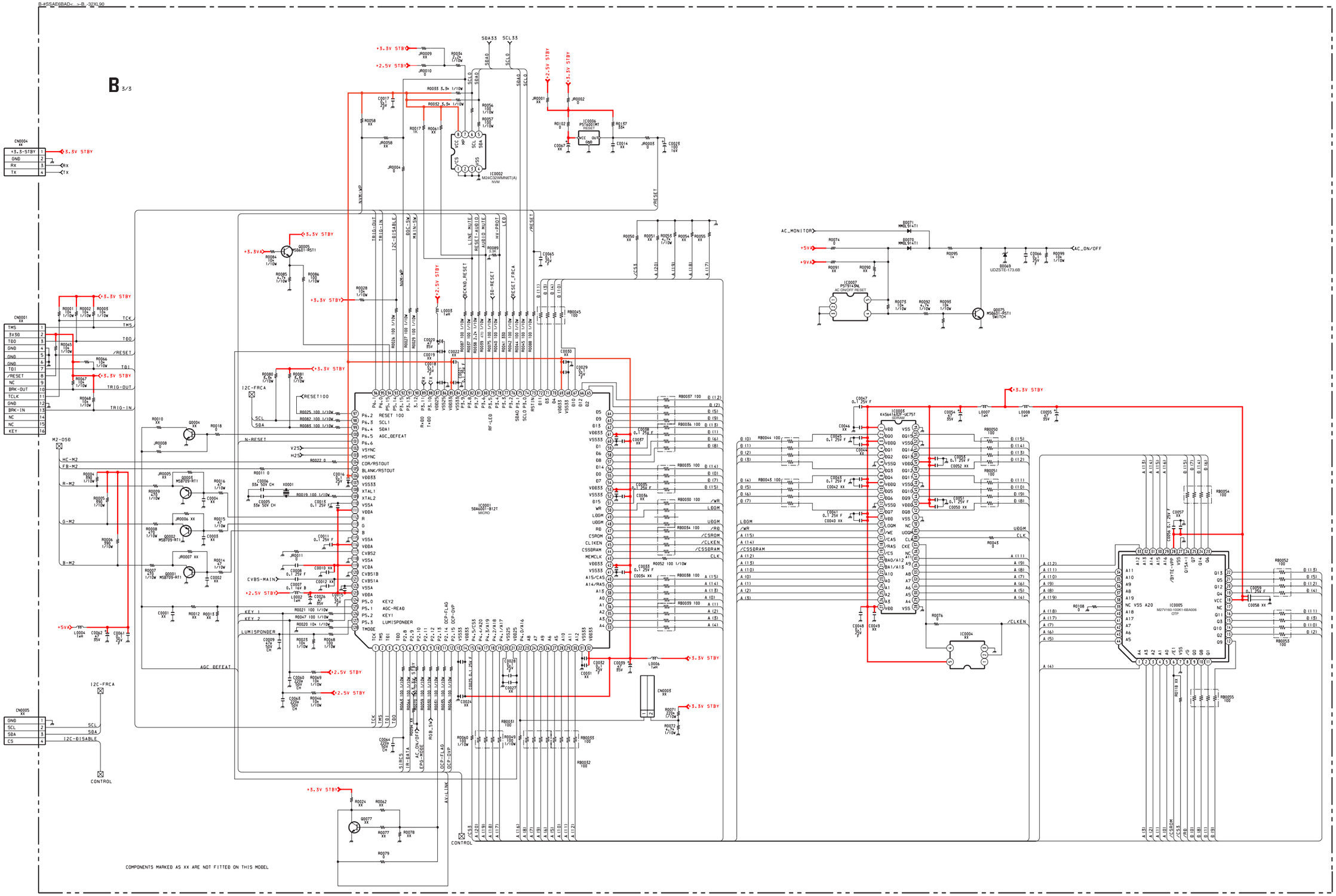
~ A Board Schematic Diagram [B Interface] Page 3/3 ~



~ B Board Schematic Diagram [Backend,Scanrate,LVDS,A_Interface] Page 1/3 ~

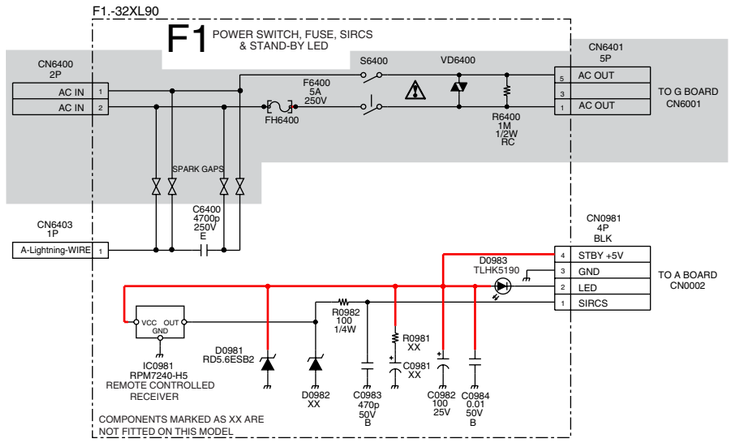


~ B Board Schematic Diagram [Backend,Scanrate,LVDS,A_Interface] Page 2/3 ~

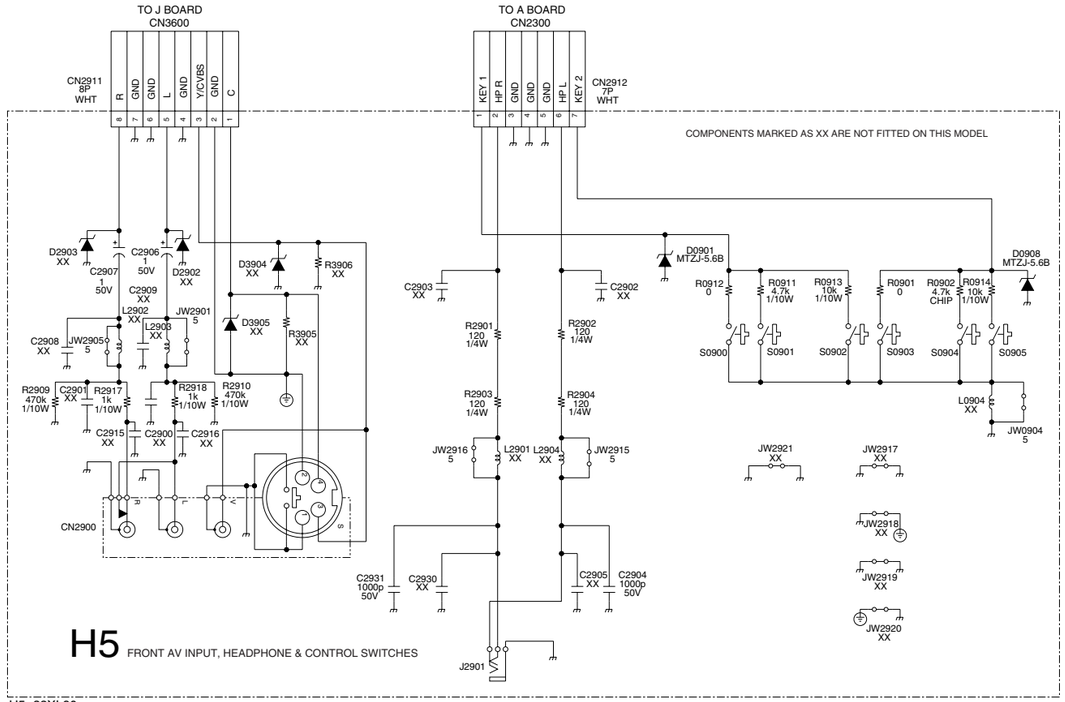


~ B Board Schematic Diagram [Backend,Scanrate,LVDS,A_Interface] Page 3/3 ~

~ F1 Board Schematic Diagram [Power Switch, Fuse, SIRCS and Stand-By LED] ~

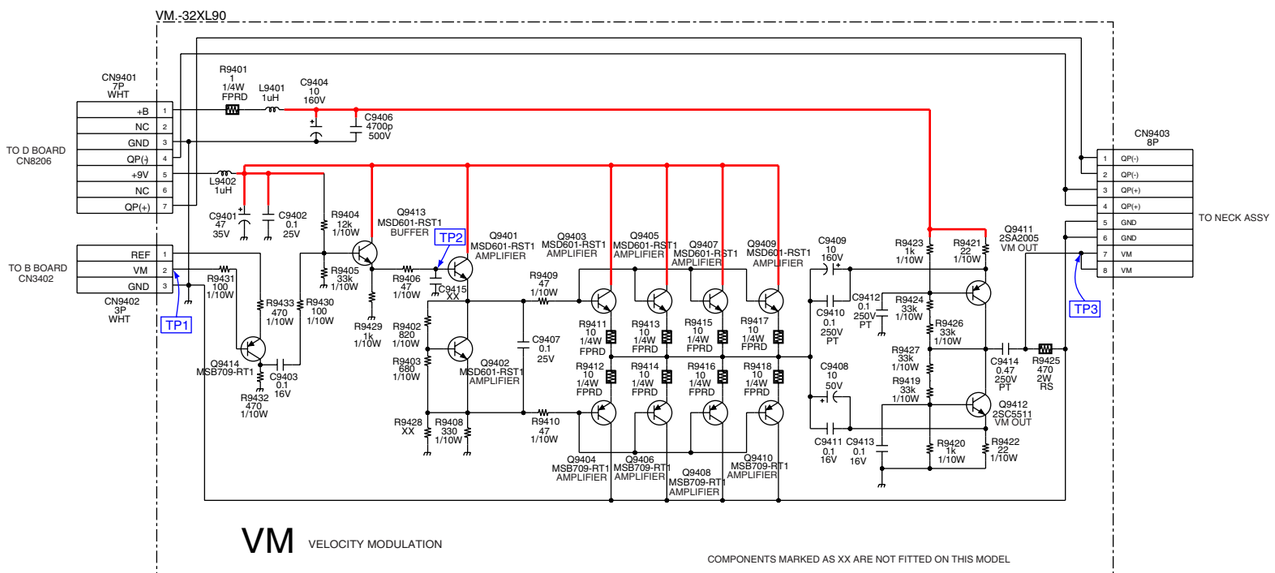


~ H5 Board Schematic Diagram [Front AV Input, Headphone and Control Switches] ~



H5.-32XL90

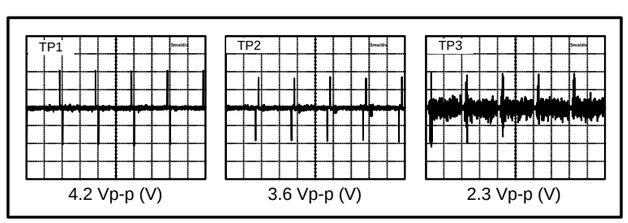
~ VM Board Schematic Diagram [Velocity Modulation] ~

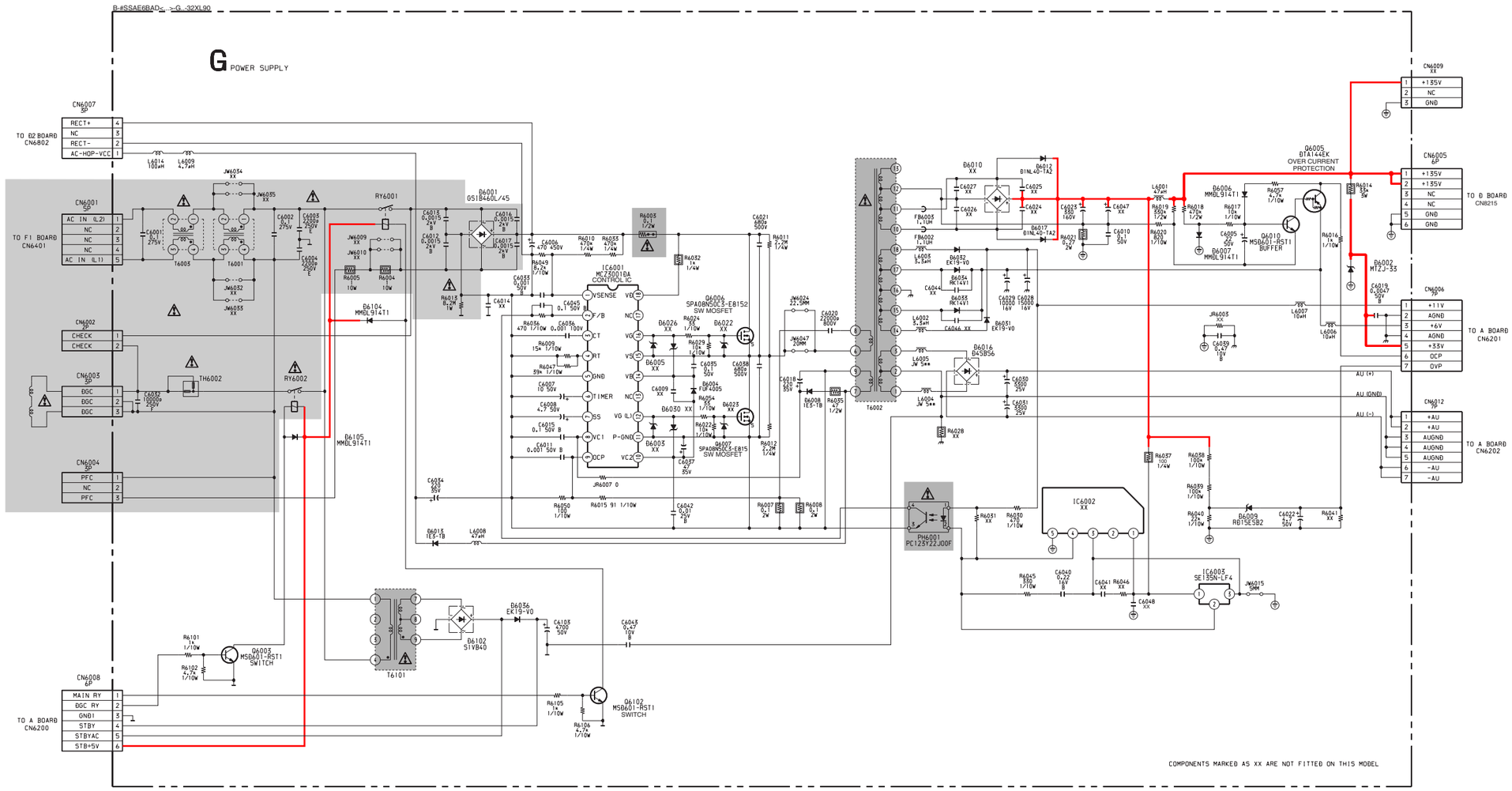


~ VM Board Voltage Table ~

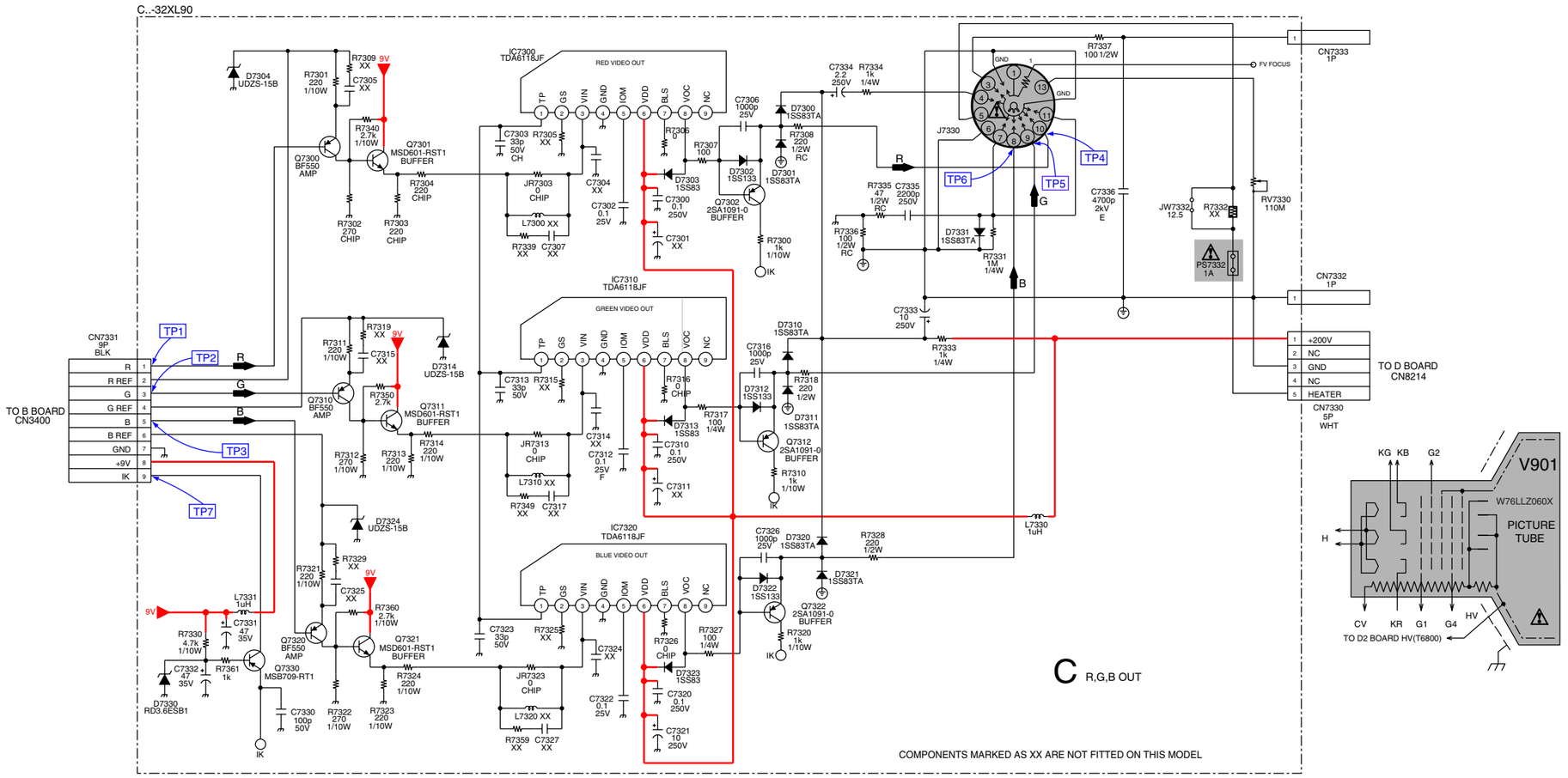
Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)
Q9401	5.1	5.7	8.9	Q9408	4.3	3.6	0
Q9402	3.4	4.3	5.1	Q9409	4.4	5.1	8.9
Q9403	4.4	5.1	8.9	Q9410	4.3	3.6	0
Q9404	4.3	3.6	0	Q9411	4.3	3.6	0
Q9405	4.4	5.1	8.9	Q9412	135.1	1.4.6	70.5
Q9406	4.3	3.6	0	Q9413	0.3	0.9	70.5
Q9407	4.4	5.1	8.9	Q9413	6.6	5.9	2.4

~ VM Board Waveforms ~

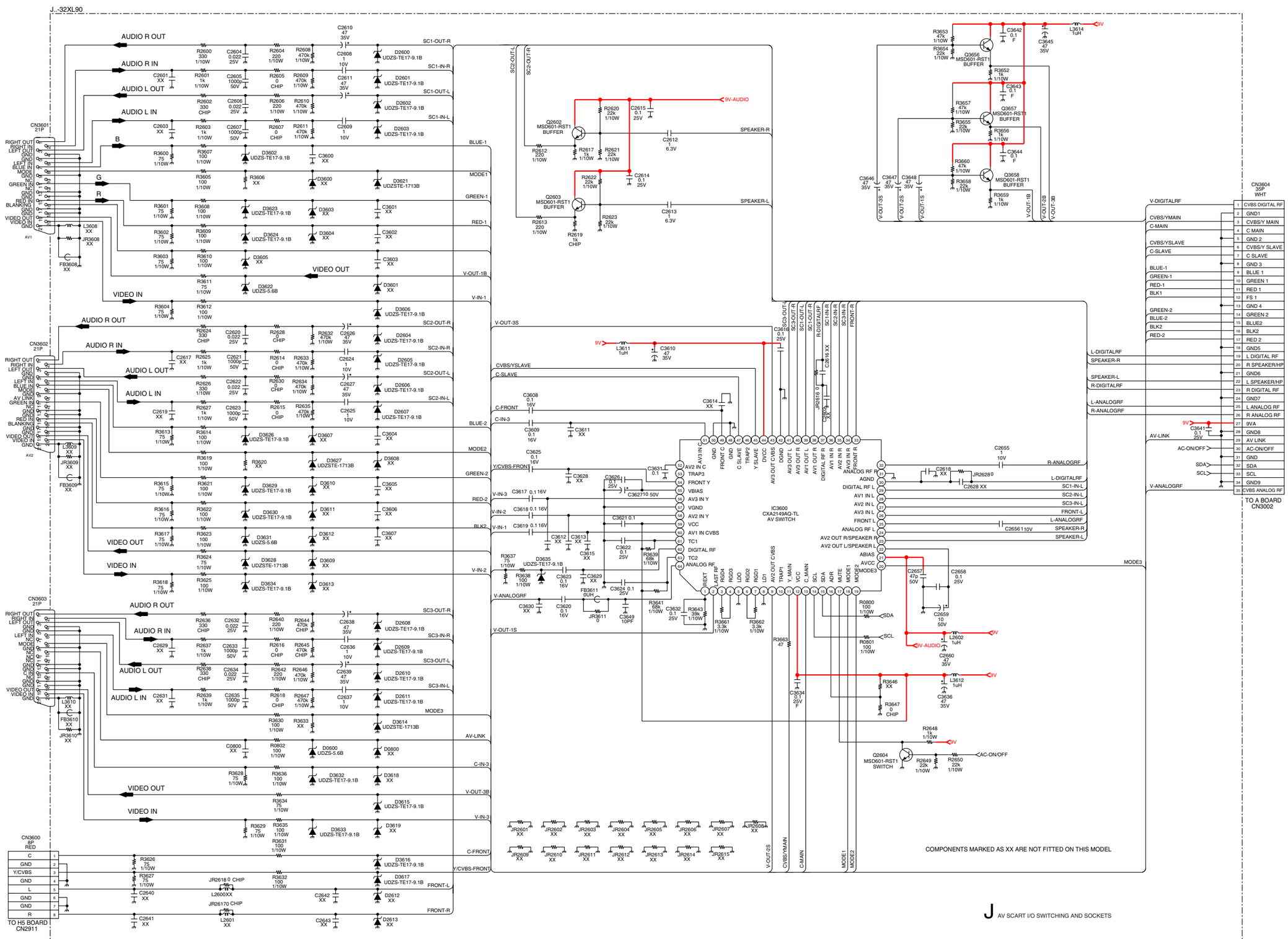




~ G Board Schematic Diagram [Power Supply] ~



~ C Board Schematic Diagram [R-G-B Out] ~



J AV SCART I/O SWITCHING AND SOCKETS

~ J Board Schematic Diagram [AV Scart I/O Switching and Sockets] ~

MS-32XL90

MS 1/3 TRIMEDIA MEMORY STICK

IC1
PNX1300EH
MEDIA PROCESSOR

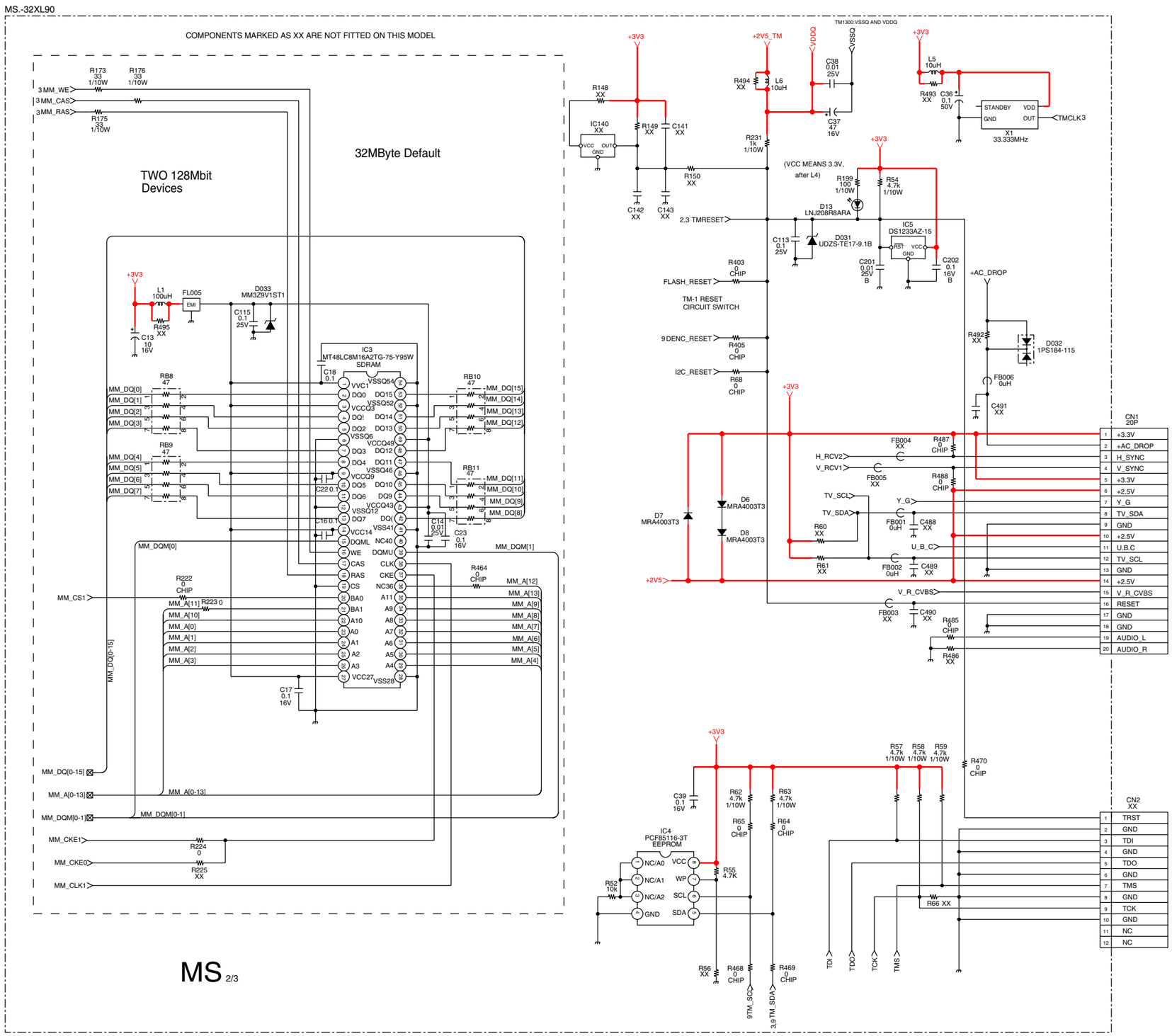
IC12
SN74LV00APWR
ADRESS DECODER

IC11
P87LPC762-7
MICRO CONTROLLER

IC8
AM29LV160DT-90EC
FLASH MEMORY

COMPONENTS MARKED AS XX ARE NOT FITTED ON THIS MODEL

~ MS Board Schematic Diagram [Trimedia Memory Stick] Page 1/3 ~

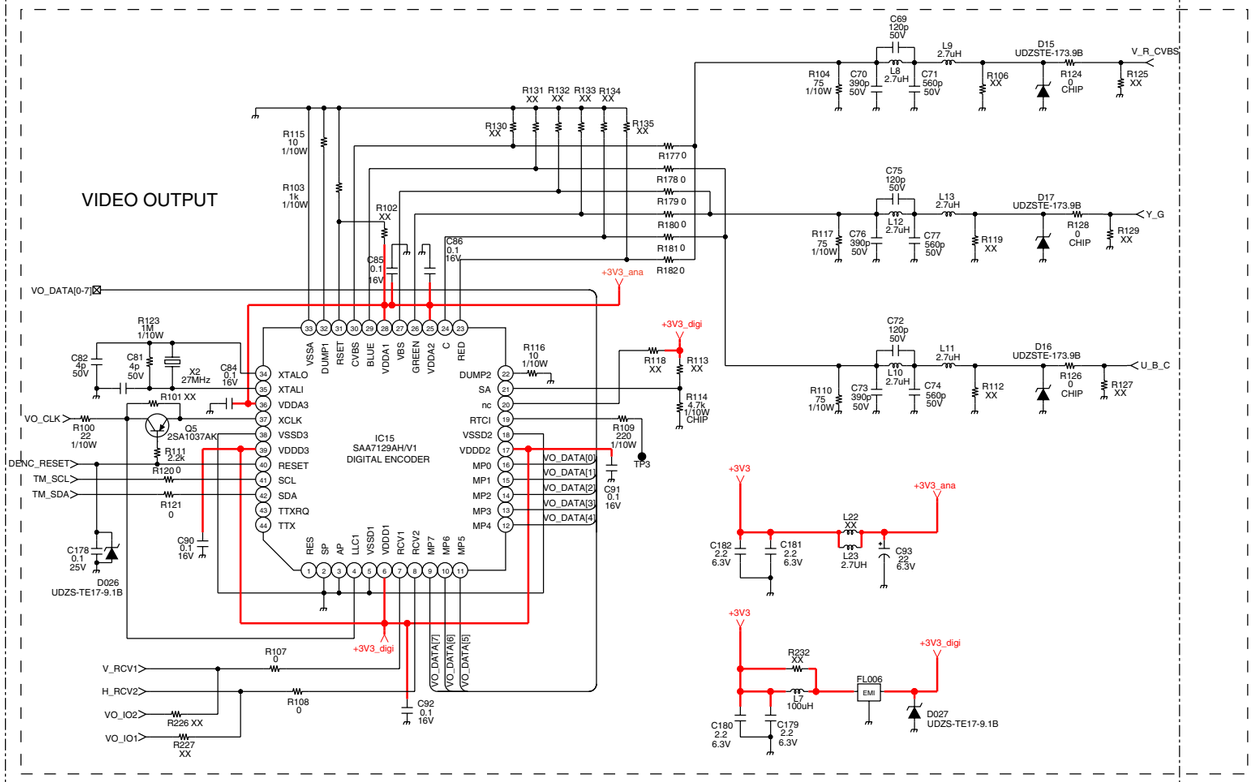


~ MS Board Schematic Diagram [Trimedia Memory Stick] Page 2/3 ~

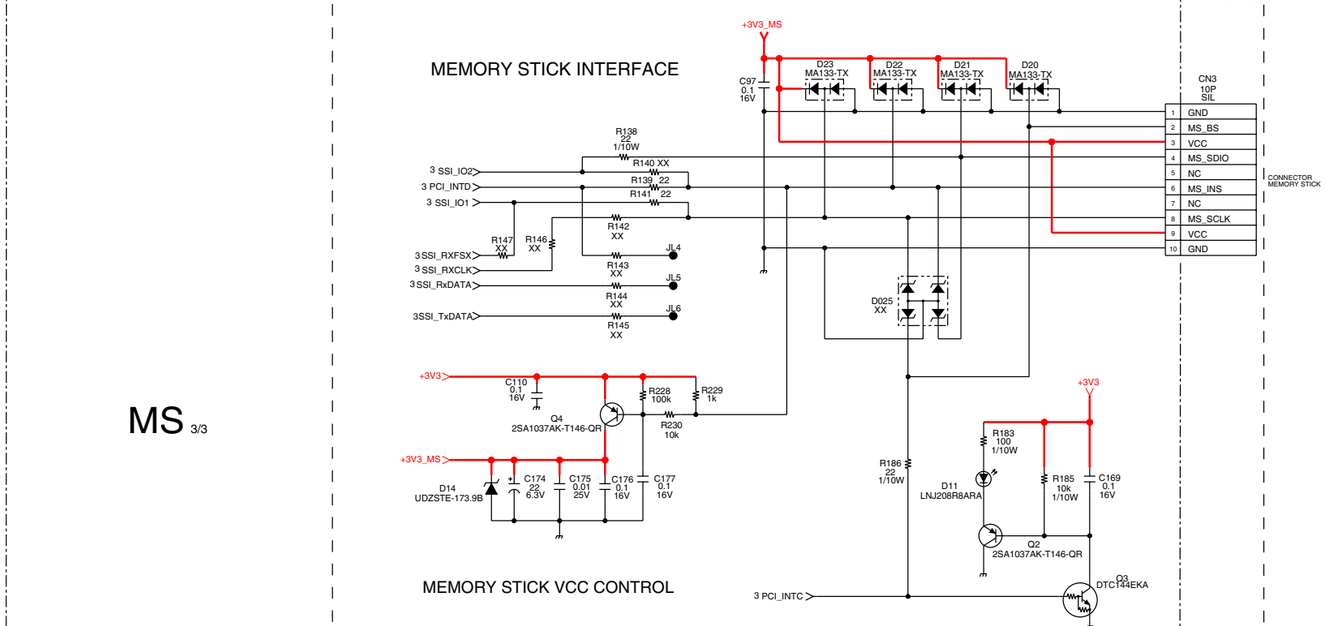
MS-32XL90

COMPONENTS MARKED AS XX ARE NOT FITTED ON THIS MODEL

VIDEO OUTPUT



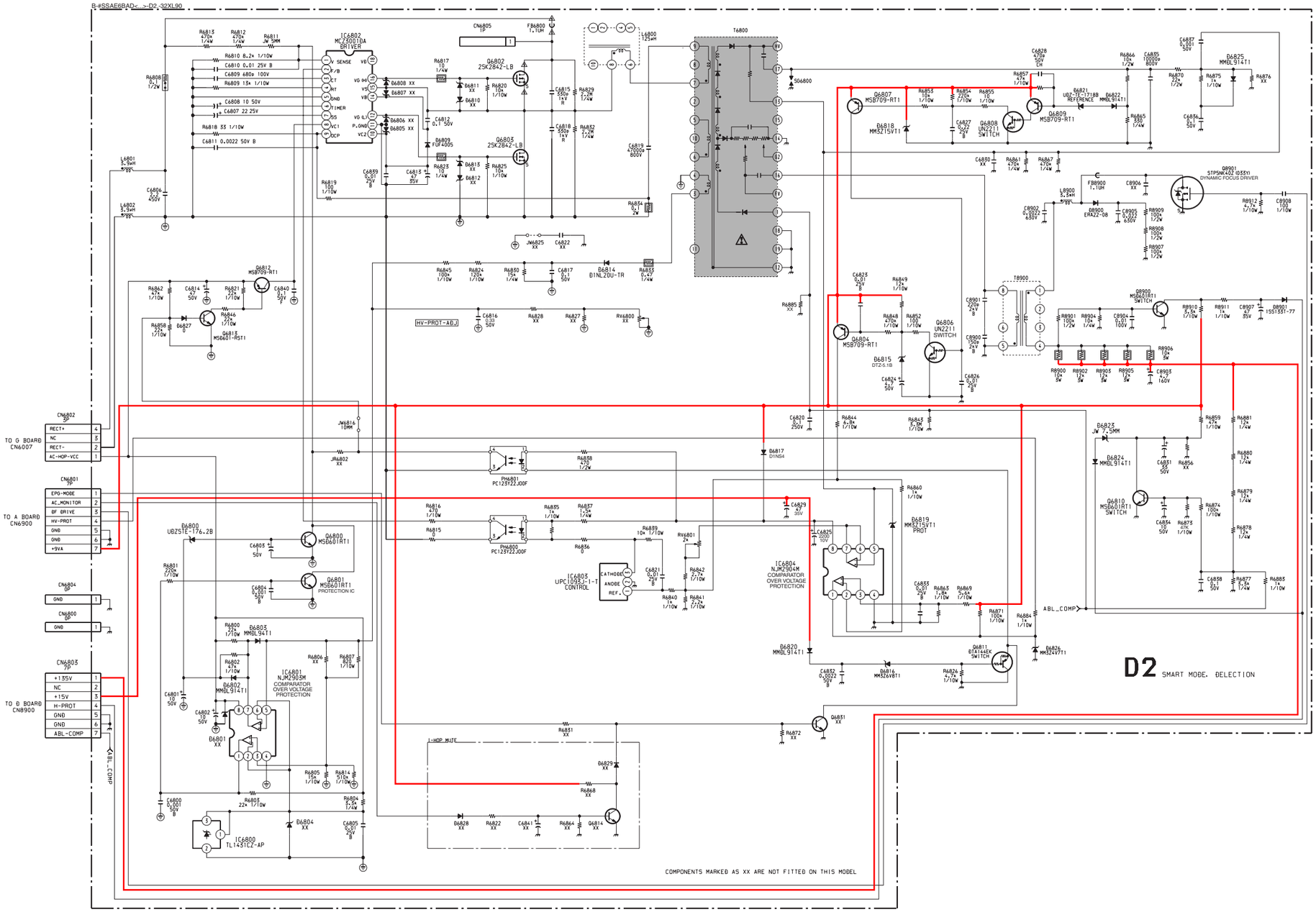
MEMORY STICK INTERFACE



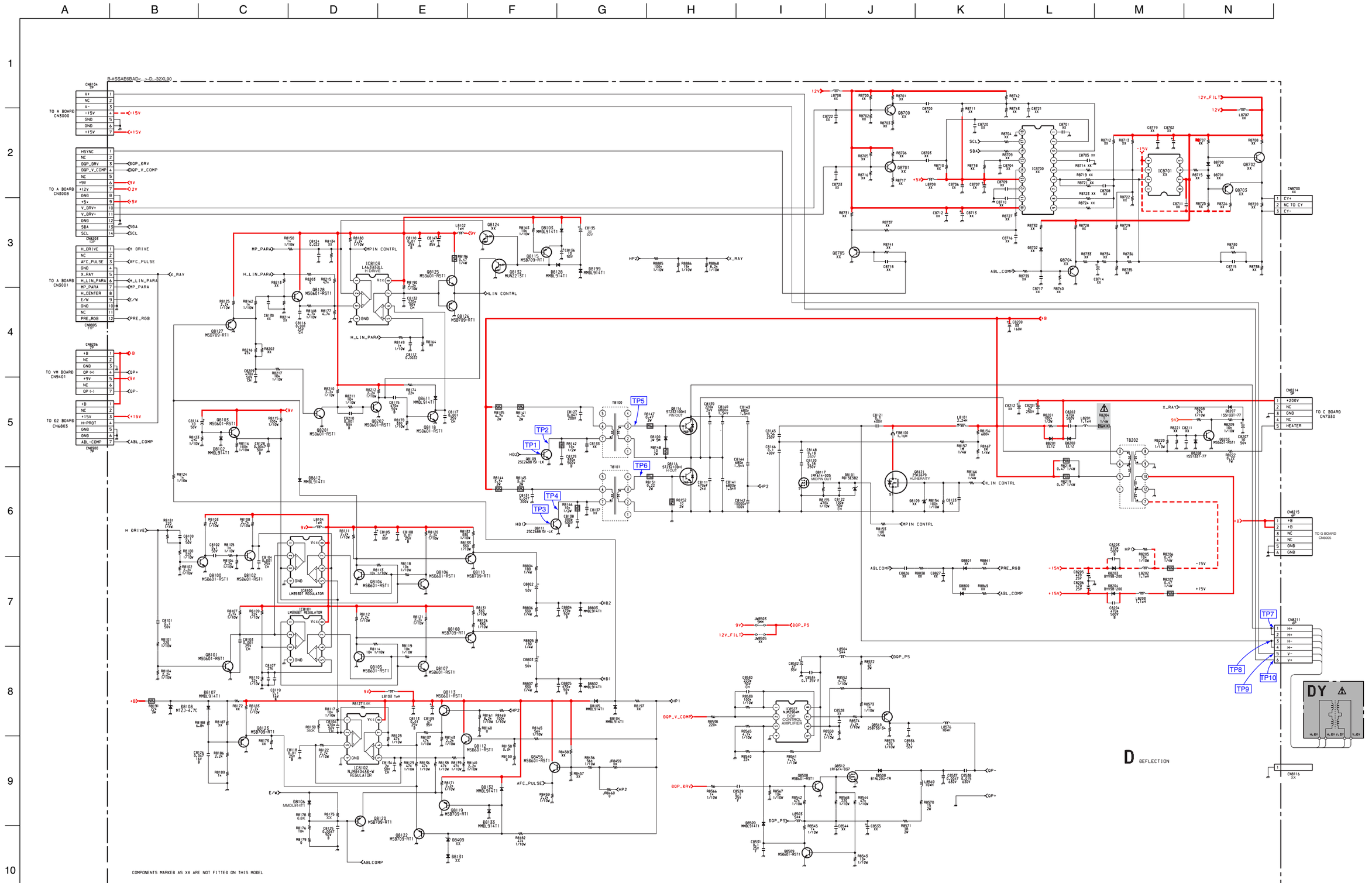
MEMORY STICK VCC CONTROL

MS 3/3

~ MS Board Schematic Diagram [Trimedia Memory Stick] Page 3/3 ~



~ D2 Board Schematic Diagram [Smart Mode Deflection] ~



~ D Board Schematic Diagram [Deflection] ~

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